Writing (Mathematics)

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Overview

How, why, where?: How do we write? Why do we write? Where can I publish my proof of the Hodge conjecture? Plus: three steps towards better writing



How do we write?



How do we write?

LaTeX for the final product



How do we write?

LaTeX for the final product

Nothing wrong with pen and paper



How do we write?

LaTeX for the final product

Nothing wrong with pen and paper

Personalise: experiment with what suits best (dictation, tablet, etc)



How do we write?

LaTeX for the final product

Nothing wrong with pen and paper

Personalise: experiment with what suits best (dictation, tablet, etc)

Planning; search e.g.

"how to write a Nature paper"

"how to write a paper (one possible answer)"



Basics...

Follow standard conventions, notation etc

Equations follow usual grammar

Break up long derivations/proofs

Provide signposts rather than show every step; avoid clutter

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To communicate results; argue a point

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To communicate results; argue a point

To contribute to the research corpus

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To organize ones thoughts (memoranda, etc)

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The alternative is worse

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From this proposition it will follow, when arithmetical addition has been defined, that 1 + 1 = 2.

Where can I publish my proof that 1 + 1 = 2?

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Where can I publish my proof that 1 + 1 = 2?

In your PhD thesis

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Where can I publish my proof that 1 + 1 = 2?

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In peer reviewed journals

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From this proposition it will follow, when arithmetical addition has been defined, that 1+1=2.

Where can I publish my proof that 1 + 1 = 2?

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In conference proceedings

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Where can I publish my proof that 1 + 1 = 2?

In your PhD thesis

In peer reviewed journals

In conference proceedings

On the arXiv





Read.



Read.

Read "Lucidity and Science, I".



Read.

Read "Lucidity and Science, I".

Read "Elements of Style".



Read



Read



"THE ELDERS, OR FRAAS GUARDED THE FARMLINGS (CHILDREN) WITH THEIR KRYTOSES, WHICH ARE LIKE SWORDS BUT ANESOMER..."



Read

Garbage in, garbage out.

Quality fiction, quality textbooks, quality papers, ...



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novels etc: time is a good filter



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novels etc: time is a good filter textbooks: more recent; try in related fields;



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novels etc: time is a good filter textbooks: more recent; try in related fields; papers: within field; read critically



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novels etc: time is a good filter textbooks: more recent; try in related fields; papers: within field; read critically pay attention to mathematical conventions

PROFESSOR MICHAEL E. McINTYRE

Centre for Atmospheric Science at the Department of Applied Mathematics and Theoretical Physics, University of Cambridge, UK

Human preceptual processing has remarkable properties, the properties that canabled our ancestors to survive. Lucki writing exploits those properties. It makes efficient use of the reader's perceptual machinery. Anyone can use this disc to improve their writing and other communication skills, by taking account of verbal, musical, and visual perceptual phenomena. Such phenomena include unconscious gap filling and grouping, and the sensitivity to organically changing patterns.

"Lucidity and Science" - Michael E. McIntyre

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Lucid writing exploits this interest and this sensitivity: avoids "gratuitous variation" builds patterns uses lucid repitition

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Lucid writing exploits this interest and this sensitivity: avoids "gratuitous variation" builds patterns uses lucid repitition

Lucid writing is highly explicit

Lucid writing builds context before introducing new points: first occurrence of an idea is critical





"If you have any young friends who aspire to become writers, the second-greatest favor you can do them is to present them with copies of The Elements of Style. The first-greatest, of course, is to shoot them now, while they're happy."

-Dorothy Parker



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"An aging zombie of a book."

-Geoffrey Pullum

-The Boston Globe



Omit needless words



Omit needless words

Use the active voice



Omit needless words

Use the active voice

Put statements in positive form

(don't avoid the omission of negatives)



Omit needless words

Use the active voice

Put statements in positive form

(don't avoid the omission of negatives)

Use definite, specific, concrete language

Summary

Read.

Read "Lucidity and Science, I".

Read "Elements of Style".



Thank you